

App. No. 10/848,756
Office Action Dated September 27, 2005

REMARKS

Favorable reconsideration of this application is requested in view of the above amendments and the following remarks. Claims 1, 2, 4, 6, and 12 are hereby amended. Claim 24 is new.

Amendment of claim 1 is supported by page 11, lines 8-11 and page 15, lines 12-29. Amendments of claims 2 and 6 are supported by page 11, lines 9-11, page 14, lines 1-12 and lines 24-33, page 15, lines 26-29, and page 17, lines 22-28. Amendment of claim 4 is supported by page 11, lines 8-11, page 14, lines 33-35, and page 15, lines 22-29. Amendment of claim 12 is supported by page 11, lines 8-15 and lines 27-30, page 15, lines 22-24, and Figure 1(c). New claim 24 is supported by page 15, lines 12-21.

Claims 1, 2, 4, and 6 were rejected under the judicially created doctrine of obviousness-type double patenting over claim 1 of US 6,795,389. A terminal disclaimer is filed herewith, rendering the rejection moot. Applicants note that the reference in the Office Action to US 5,931,904 seems to be an inadvertent error.

Claims 1, 2, 4, 6, and 12 were rejected under the judicially created doctrine of obviousness-type double patenting over claim 1 of US 6,894,962. A terminal disclaimer is filed herewith, rendering the rejection moot.

Claims 1, 2, and 12 were rejected as being unpatentable over Yoshioka (EP 0 567 086), in view of Satoh (US 5,428,597). Applicants traverse this rejection. Applicants note that Satoh is not listed on the 892 form. Correction is requested.

Yoshioka does not suggest an optical information recording medium comprising a plurality of information layers from which information signals can be reproduced by one-sided irradiation of light beams, as required by claims 1 and 12. Rather, Yoshioka teaches a double-sided disk that uses both of its sides for recording and reproduction with a recording/reproducing apparatus having two optical systems located above and below the disk (see column 3, lines 39-48). Yoshioka teaches information signals in each of the information layers that are

App. No. 10/848,756

Office Action Dated September 27, 2005

recorded/reproduced by light beams illuminating the disk from both sides. Therefore, Yoshioka does not teach an optical information recording medium wherein at least the information layers except for the most distant information layer from an incident side of the light beams are semi-transmissive to the light beams, as required by claim 1. Nor does the reference teach a separating layer that is transparent to a wavelength of the light beams and is formed between the information layers, as required by claims 1 and 12.

Further, neither Yoshioka nor Satoh suggests an optical information recording medium wherein positions of sector addresses of respective information layers coincide in both a circumferential direction and a radial direction, as required by claim 1. Rather, Yoshioka teaches positioning of information layers of two substrates that have center holes into which center shafts are inserted. The positioning is performed while rotating the substrates. Therefore, the positioning is performed only in a circumferential direction and **not** in a radial direction. In contrast, positioning of the sector addresses of respective information layers, required by claim 1, prevents an optical effect caused between the information layers with a sector structure. The invention of claim 1 takes into account that the transmittance of the first information layer is changed by recording and may affect the recording and reproduction in a second information layer. See page 2, lines 13-37, page 12, lines 5-20, and Figures 2 and 9. Satoh teaches that a position of the identification section Ida of a recording layer (3) and that of the identification section IDb of a recording layer (4) coincide in a circumferential direction. In a radial direction, however, a track of the recording layer (3) is displaced by $\frac{1}{2}$ of a track pitch from a track of the recording layer (4). See Figures 1 and 2.

Even further, the combination of Yoshioka and Satoh does not teach a sector address comprising a recording mark formed by irradiation of light beams, where positions of the sector addresses of the respective information layers coincide in the circumferential direction, as required by claim 12. Rather, Yoshioka and Satoh teach sector addresses that are formed of concave-convex pits. The configuration of claim 12 provides sector addresses that can be recorded after the formation of the information layers by using recording laser beams in the same manner as recording the information signals. This configuration eliminates the need for positioning in the circumferential direction when the information layers are laminated, which

App. No. 10/848,756
Office Action Dated September 27, 2005

provides an optical information recording medium in which the position of address signals of the respective information layers coincide (see page 22, line 37 to page 23, lines 2 of the current application).

Favorable reconsideration of claims 1, 2, and 12 is requested.

Claims 4 and 6 were rejected as being unpatentable over Yoshioka, in view of Satoh, and further in view of Kawamura (US 6,424,614). Applicants traverse this rejection. Applicants note that the Office Action recites "Okada as applied to claims 1-2 and 12 above". This seems to be an inadvertent error, and therefore Yoshioka and Satoh are assumed to be the primary references. As noted above, the combination of Yoshioka and Satoh does not teach an optical information recording medium comprising a plurality of information layers from which information signals can be reproduced by one-sided irradiation of light beams, wherein at least the information layers except for the most distant information layer from an incident side of the light beams are semi-transmissive to the light beams, and a separating layer that is transparent to a wavelength of the light beams is formed between the information layers, as currently required by claim 4.

Further, the combination of Yoshioka, Satoh, and Kawamura does not suggest an optical information recording medium wherein a sector position identifier is located at a radial position other than the data area and the sector address in each information layer to identify the position of each information layer in the circumferential direction, and positions of the sector addresses of the respective information layers coincide in the circumferential direction, as currently required by claim 4. Yoshioka teaches forming a through hole in each of two substrates or forming a notch or projection at the outer edges of the substrates so that the positions of the respective information layers coincide in a circumferential direction. Yoshioka additionally teaches using two substrates provided with positioning marks. Each of the positioning marks is made up of a group of recesses, and a change in the amount of reflected light is detected from the opposite sides of the two substrates, thereby positioning the upper and lower substrates. However, such a positioning method cannot be implemented by simply observing the through holes, and requires an additional detection means, such as a pin, a light-emitting element, or a light-receiving element. Since Yoshioka teaches a double-sided disk and does not include all of the elements

App. No. 10/848,756
Office Action Dated September 27, 2005

required by claim 4, any sector position identifier configuration taught the reference would be unsuitable for positioning that is performed by observation from only one side of the disk. The recording medium of claim 4 provides simple yet highly accurate positioning.

Satoh does not remedy the deficiencies of Yoshioka. Satoh teaches fixing two substrates with an adhesive (spacer 5), but does not disclose how the sector positions coincide. Therefore, Satoh does not teach the sector position identifier required by claim 4.

Kawamura likewise does not remedy the deficiencies of Yoshioka. Kawamura teaches content information stored in sector address of a multilayer medium, but does not suggest how the sector positions coincide in the circumferential direction. Therefore, Kawamura does not teach the sector position identifier required by claim 4.

Favorable reconsideration of claims 4 and 6 is requested.

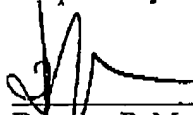
In view of the above, favorable reconsideration in the form of a notice of allowance is requested. Any questions regarding this communication can be directed to the undersigned attorney, Douglas P. Mueller, Reg. No. 30,300, at (612)455-3804.

Dated: January 27, 2006



DPM:mfc

Respectfully Submitted,



Douglas P. Mueller
Reg. No.: 30,300
Hamre, Schumann, Mueller & Larson, P.C.
225 South Sixth Street
Suite 2650
Minneapolis, MN 55402
612.455.3800